CLAIM AMENDMENTS

1-16. (Cancelled)

17. (Currently Amended) A method of achieving directional pickup of a radiated energy signal using a shadowing effect created by an energy propagation barrier, the method comprising:

locating a first sensor on one side of the barrier and a second sensor on an opposite side of the barrier;

determining a difference between amplitudes of signals respectively produced by the first and second sensors;

adjusting the amplitudes of the signals ~~produced by the first and second sensors~~ based on the determined amplitude difference to produce adjusted signals; and

summing together the adjusted signals to produce a directional signal.

18. (Original) The method of claim 17, wherein the adjusted signals are of approximately equal magnitude.

19. (Currently Amended) The method of claim 17, ~~comprising summing together~~ wherein the adjusted signals are summed together to produce multiple directional signals.

20. (Original) The method of claim 19, wherein the multiple directional signals form a binaural signal pair including a first directional signal in which energy from the first sensor is greater than energy from the second sensor, and a second directional signal in which energy from the second sensor is greater than energy from the first sensor.

21. (Currently Amended) The method of claim 17, further comprising, for each of multiple frequency bands: ~~for each of multiple frequency bands,~~

deriving a phase correction value; and

applying the phase correction value within that frequency band.

22. (Currently Amended) The method of claim 21, wherein ~~deriving a~~ the amplitude difference between the signals is determined within each of the multiple frequency bands, and the phase correction value ~~comprises determining within that frequency band a measure of a magnitude difference between a signal produced by the first sensor and a signal produced by the second sensor~~ determination is based on the amplitude difference determined within the respective frequency band.

23. (Currently Amended) Apparatus for achieving directional pickup of a radiated energy signal using a shadowing effect created by an energy propagation barrier, the apparatus comprising:

a first sensor configured for being located on one side of the barrier ~~and~~;

a second sensor configured for being located on an opposite side of the barrier;

~~means for~~ processing circuitry configured for determining a difference between the amplitudes of signals respectively produced by the first and second sensors, for adjusting the amplitudes of the signals ~~produced by the first and second sensors~~ based on the determined amplitude difference to produce adjusted signals; and ~~means~~ for summing together the adjusted signals to produce a directional signal.

24. (Original) The apparatus of claim 23, wherein the adjusted signals are of approximately equal magnitude.

25. (Currently Amended) The apparatus of claim 23, ~~comprising means~~ wherein the processing circuitry is configured for summing together the adjusted signals to produce multiple directional signals.

26. (Original) The apparatus of claim 25, wherein the multiple directional signals form a binaural signal pair including a first directional signal in which energy from the first sensor is greater than energy from the second sensor, and a second directional signal in which energy from the second sensor is greater than energy from the first sensor.

27. (Currently Amended) The apparatus of claim 23, ~~further comprising: means~~ wherein the processing circuitry is configured for, for each of multiple frequency bands, deriving a phase correction value and applying the phase correction value within that frequency band.

28. (Currently Amended) The apparatus of claim 27, wherein the processing circuitry is configured for determining the amplitude difference between the signals within each of the multiple frequency bands, ~~said means~~ and the processing circuitry is configured for deriving a phase correction value ~~comprises means for determining within that frequency band a measure of a magnitude difference between a signal produced by the first sensor and a signal produced by the second sensor~~ based on the amplitude difference determined within the respective frequency band.

29. (New) The method of claim 17, wherein the energy propagation barrier is the head of a user.

30. (New) The method of claim 17, wherein the signals are sound signals.

31. (New) The method of claim 30, further comprising processing the directional signal to produce a resultant sound.

32. (New) The method of claim 31, further comprising inputting the resultant sound into left and right ears of a user.

33. (New) The apparatus of claim 23, wherein the energy propagation barrier is the head of a user.

34. (New) The apparatus of claim 23, wherein the first and second sensors are microphones.

35. (New) The apparatus of claim 23, wherein the processing circuitry comprises a digital signal processor (DSP).

36. (New) A method of achieving directional pickup of a radiated energy signal using a shadowing effect created by an energy propagation barrier, the method comprising:

locating a first sensor on one side of the barrier and a second sensor on an opposite side of the barrier;

determining a difference between amplitudes of signals respectively produced by the first and second sensors;

determining a phase correction value based on the signal amplitude difference;

applying the phase correction value to the signals to produce phase corrected signals; and

summing together the phase corrected signals to produce a directional signal.

37. (New) The method of claim 36, wherein the phase correction value is determined as a function of the signal amplitude difference and a frequency of the signals.

38. (New) The method of claim 36, wherein the phase correction value is determined to equalize a phase of the signals at a specific frequency with the phase of signals produced by the first and second sensors at a different baseline frequency.

39. (New) The method of claim 36, wherein the phase correction value changes in accordance with a corrected phase rate that is a function of a change in phase difference between the signals divided by a change in amplitude difference between the signals.

40. (New) The method of claim 39, further comprising determining the corrected phase rate by applying a multiplication factor to an uncorrected phase rate.

41. (New) The method of claim 40, wherein the multiplication factor is a function of an azimuthal angle dependent phase slope at a baseline frequency divided by an azimuthal dependent phase slope at a frequency of the signals.

42. (New) The method of claim 36, wherein the phase correction value is determined from a look-up table.

43. (New) The method of claim 36, wherein the phase correction value is mathematically determined.

44. (New) The method of claim 36, further comprising:

adjusting the amplitudes of the signals based on the determined amplitude difference to produce adjusted signals; and

summing together the adjusted signals to produce the directional signal.

45. (New) The method of claim 44, wherein the adjusted signals are of approximately equal magnitude.

46. (New) The method of claim 36, wherein the signals are summed together to produce multiple directional signals.

47. (New) The method of claim 46, wherein the multiple directional signals form a binaural signal pair including a first directional signal in which energy from the first sensor is greater than energy from the second sensor, and a second directional signal in which energy from the second sensor is greater than energy from the first sensor.

48. (New) The method of claim 36, wherein the amplitude difference between the signals is determined within each of the multiple frequency bands, the phase correction value determination is based on the amplitude difference determined within each of the frequency bands, and the phase correction value is applied to the signals within each of the frequency bands.

49. (New) The method of claim 36, wherein the energy propagation barrier is the head of a user.

50. (New) The method of claim 36, wherein the signals are sound signals.

51. (New) The method of claim 36, further comprising processing the directional signal to produce a resultant sound.

52. (New) The method of claim 51, further comprising inputting the resultant sound into left and right ears of a user.